

## Chapter 6.6

# Understanding Information Technology Implementation Failure: An Interpretive Case Study of Information Technology Adoption in a Loosely Coupled Organization

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### ABSTRACT

This chapter uses the theory of loose coupling to explain failure in the adoption of an information technology aimed at improving collaboration across one organization's internal boundaries. The research details an interpretive case study of a single organization, MacGregor Crane, in which relatively autonomous individuals are only loosely connected in terms of their daily interactions. The company implemented Lotus Notes® in an attempt to increase collaboration. However, this effort failed because employees in various units, particularly engineering, were reluctant to share information across unit boundaries. In light of these findings, it is suggested that the successful

implementation of a collaborative IT within a loosely coupled organization should involve the reconsideration of the organizational members' roles and functions.

### INTRODUCTION

In this postindustrial era, firms are becoming more dependent on horizontal collaborations of diverse groups rather than vertical chains of command (Barley, 1996; Kellogg, Orlikowski, & Yates, 2006). To facilitate such horizontal collaborations, organizations have relied on information technologies (IT) to support coordination among peers. However, in many cases, the implementation and use of collaborative technologies have led to mixed results. This can be comprehended

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by recognizing that the successful implementation and use of IT in an organization is greatly influenced by an organizational culture supportive of high trust, willingness to share information, and commitment to organizational goals. To this end, typical barriers to the successful adoption of IT in organizations can be found in political friction between organizational roles (Mähring Holmström, Keil, & Montealegre, 2004; Orlikowski, 1992).

This chapter is based on a study conducted at MacGregor Crane, an organization in the business of developing and constructing shipboard cranes. MacGregor Crane includes a number of organizational members who largely work in parallel from one another. MacGregor Crane fits the general description of a “loosely coupled” system, a description that underlines how organizational members have great latitude in interpreting and implementing directions despite the presence of other organizational members. Weick (1979) stresses the autonomy of individuals and the looseness of the relations linking individuals in an organization. Whereas loosely coupled systems are characterized by both distinctiveness and responsiveness (Orton & Weick, 1990), a potential downside for loosely coupled systems is poor collaboration among organizational members. The IT project initiated at MacGregor Crane was aimed at dealing with this problem.

The use of IT for coordination is more complex than suggested in the academic and practitioner literature (for a discussion, see Kling, 2002). Coordination, as the management of dependent activities (Crowston, 2003; Malone & Crowston, 1994), is central to organizing, and as more and more organizations become flat and outsourced, many organizations look to new technologies to help them with organizing. Looking for solutions to the problems of lack of collaboration among organizational members, MacGregor Crane turned to IT as a possible solution. MacGregor Crane decided to launch a project aiming at delivering a collaborative technology, Lotus Notes®, which

was expected to increase collaboration both within and across professional boundaries.

The goal of this chapter is to explain an organization’s failure to successfully implement a technology targeted at increasing collaboration between organizational members. More specifically, our core research question asks: “Why was MacGregor Crane unsuccessful in fostering collaboration supported by Lotus Notes®?” We suggest that loose coupling (Meyer & Rowan, 1976; Weick, 1979) is a particularly appropriate theory to answer this question, as MacGregor Crane fits the general description of a “loosely coupled” organization.

The chapter is structured as follows: “Literature” discusses organizational change, collaborative technology, as well as loosely coupled systems. In “Case: MacGregor Crane”, details about our inquiry at MacGregor Crane are provided. More specifically, this section describes the selected site and the research approach, followed by an account of MacGregor Crane’s Lotus Notes® implementation. A discussion of the case study findings is presented in “Discussion,” followed by concluding remarks in “Conclusion.”

## LITERATURE

The relation between IT and organizational change has always been a central concern for IT practitioners and academicians. While new IT shape organizational behavior and structure, the role and meaning of IS is largely shaped by organizational circumstances. The two are inextricably intertwined: there is a reciprocal relationship between ITs and organizations, each shaping the other (see e.g., DeSanctis & Poole, 1994; Kling & Iacono, 1989; Monteiro & Hanseth, 1995; Orlikowski, 2000). In other words, contemporary organizations are entangled with technology. One cannot understand organizations without understanding technology, or understand technology without understanding organizations.

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